

REMARKS

This amendment after final rejection should be entered because the claim amendments contained therein address a new prior art rejection made for the first time in the final rejection and thus such amendments could not have been submitted earlier. Further, the “final” status of the rejection should be withdrawn because it asserts a new ground of rejection and withdrew all prior grounds for rejection. Applicants should be given an opportunity to respond to the new grounds for rejection without the “final” status of the rejection.

The rejection of claims 1 to 33 as being obvious over Vosteen ‘358 (US Patent 6,878,358) in view of Sellakumar (US Patent 6,960,329) has been overcome in view of the amendment to independent claims 1 and 26. The amendment limits the halogen-containing additive selected from a group consisting of NH_4Cl and NH_4I .

Independent claims 1 and 26 require the halogen-containing additive to include an ammonium (NH_4) compound and particularly the additive being ammonium bromide and/or ammonium iodine. These claims are directed to a method for oxidizing elemental mercury using a halogen-containing additive that includes an ammonium bromide and/or ammonium iodine, adsorbing the oxidized mercury and collecting the adsorbent with the oxidized mercury.

Vosteen ‘358 does not disclose or suggest using a halogen-containing additive including ammonium bromide and/or ammonium iodine. Vosteen ‘358 discloses using

bromine and sulfur to oxidize elemental mercury in flue gas. Specifically, Vosteen '358, col. 2, lns. 25-32 states:

“The addition of bromine or bromine compounds to the furnace causes, under the given conditions of a high-temperature process or the like, in the presence of a sulphur [sic. sulfur] compound, in particular in the presence of sulphur [sic. sulfur] dioxide, a substantial, essentially complete, oxidation of the mercury and therefore allows substantial removal of the mercury from flue gases.”

The use of bromine and sulfur is central to the method for oxidizing mercury disclosed in Vosteen '358. There is also a brief mention in Vosteen '358 at col. 4, lns. 46-54, of chlorine as an oxidation agent for mercury, but Vosteen does not recommend the use of chlorine as replacement for bromine. No elements or compounds, other than bromine, sulfur and chlorine compounds, are disclosed in Vosteen '358 for use in oxidizing mercury.

Sellakumar teaches the injection of a chloride-containing salt, such as ammonium chloride, to oxidize mercury in flue gas. No other halogen containing ammonium salts are disclosed by Sellakumar. Sellakumar teaches that the injection of other chlorine containing salts can be used to oxidize mercury, but does not disclose any salts of bromine or iodine.

All claims are in good condition for allowance. If any small matter remains outstanding, the Examiner is requested to telephone applicants' attorney. Prompt reconsideration and allowance of this application is requested.

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: /Jeffry H. Nelson/

Jeffry H. Nelson
Reg. No. 30,481

JHN:glf
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100